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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,140	09/30/2003	Leonard J. Stulc	SAM0020/US	6403

7590 03/02/2007  
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EXAMINER
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KHAN, AMINA S

ART UNIT	PAPER NUMBER
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1751

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/02/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/676,140

Applicant(s)

STULC, LEONARD J.

Examiner

Amina Khan

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-43 is/are pending in the application.
- 4a) Of the above claim(s) 38-41 and 43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-37 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 24-43 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 8, 2007 has been entered.

2. Claims 24-43 are pending. Claims 38-41 and 43 have been withdrawn from consideration due to non-elected inventions. Claims 1-23 have been cancelled. Claims 24-43 are new.

3. All previous rejections are rendered moot in view of applicant's cancellation of the claims.

### ***Election/Restrictions***

4. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 24-37 and 42, drawn to coloring compositions, classified in class 8, subclass 636.
- II. Claim 38, drawn to latex paints, classified in class 523, subclass 334.

- III. Claims 39 and 40, drawn to toners, classified in class 430, subclass 107.1.
- IV. Claim 41, drawn to inks, classified in class 106, subclass 31.31.
- V. Claim 43, drawn to methods of imparting color to a surface, classified in class 8, subclass 636.

5. Inventions II, III and IV are directed to related products. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed are directed to products with different mode of operation and function. Paints function differently than inks or toners and have different compositions. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

6. Inventions I and V are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the coloring composition of invention I can be used in methods other than those taught in invention V.

7. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required

Art Unit: 1751

because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

8. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

9. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

10. During a telephone conversation with Dale Bjorkman on February 28, 2007 a provisional election was made with traverse to prosecute invention I, claims 24-37 and 42. Affirmation of this election must be made by applicant in replying to this Office action. Claims 38-41 and 43 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Claim Rejections - 35 USC § 112***

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 1751

12. Claims 24-37 and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim language "in a format ready for application to a desired substrate" recited in claims 24 and 36 is considered new matter. The added limitation in the claim lacks literal basis in the specification as originally filed, see *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983) *aff'd mem.* 738 F.2d 453 (Fed. Cir. 1984). Appropriate correction of the claim language is required.

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 24-37 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 24, 36 and 37 recite the limitation of "10  $\Delta E^*$ " without defining the measurement system by which this value is determined rendering the claim indefinite. The examiner suggest the applicant amend the claim to include "measured in accordance with the CIE L\*A\*B\* color system". Claims 25-35 and 42 are rejected for being dependent on the rejected base claims and inheriting the same deficiency. Appropriate correction of the claim language is required.

Art Unit: 1751

15. Claims 24-37 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 24 and 36 recite the limitation of "predetermined ratio" rendering the claim indefinite. The examiner suggests the applicant amend the claim to replace to clarify the definition of predetermined. Claims 25-35, 37 and 42 are rejected for being dependent on the rejected base claims and inheriting the same deficiency. Appropriate correction of the claim language is required.

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24-37 and 42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hall (US 4,130,435).

Hall teaches ink compositions prepared by reacting a single or plurality of water-soluble anionic dyes with a single or a plurality of water-soluble cationic dyes (column 2, lines 15-45). In example 6 (column 4, lines 50-65), Hall teaches reacting disulfonated copper phthalocyanine with CI Basic Blue 7 in the presence of 10% aqueous sodium hydroxide and water. In example 5 (column 4, lines 35-50), Hall teaches reacting disulfonated copper phthalocyanine with Crystal Violet in the presence of 10% aqueous sodium hydroxide. Hall further teaches that dyes comprise water (column 3, lines 48-49;

column 4, lines 33-34) and a viscosity adjuster, thermoplastic phenol formaldehyde resin, which meets the limitation of a binder (column 4, lines 63-65). Hall further teaches that anionic dyes such as azo, phthalocyanine and anthroquinone dyes may be used (column 2, lines 15-25). Hall further teaches cationic dyes such as various basic blue and violet dyes (column 2, lines 30-44). Hall further teaches that the ball-point pen ink is substantially insoluble in water (column 1, lines 24-46).

Regarding the claimed limitations of a color difference between the anionic and cationic dyes of at least about 10  $\Delta E^*$  units, complexes with molecular weights of less than 5000 or 3000 Daltons, and a water solubility of less than 100 parts per million, Hall is silent towards these properties and does not explicitly teach these limitations. However, it is reasonable to presume that the said properties are encompassed by the teachings of Hall because the presumption is supported by the use of similar dyes and similar colorless counter ions in similar percentages to produce similar inks to those instantly claimed. The burden is on the applicant to prove otherwise. In re Fitzgerald, 205 USPQ 594.

In the alternative, the claimed limitations of a color difference between the anionic and cationic dyes of at least about 10  $\Delta E^*$  units, complexes with molecular weights of less than 5000 or 3000 Daltons, and a water solubility of less than 100 parts per million would obviously have been provided by the process as disclosed by Hall, because achieving the properties would have been a matter of optimizing a result effective variable. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Hall



Art Unit: 1751

clearly teaches a broad range of anionic and cationic dyes and producing inks which are substantially insoluble in water.

17. Claims 24-37 and 42 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mueller et al. (US 2,922,690).

Mueller et al. teaches salt like dyestuff compositions prepared by precipitating dissolved anionic dyes with dissolved cationic dyes (column 1, lines 15-22). Mueller et al. further teaches replacing part of the cationic and/or anionic dyestuff or dyestuffs by colorless cationic and/or anionic substances (column 2, lines 45-50). Mueller et al. further teaches replaced with a colorless compound is recommended, for example, when, in the use of a dyestuff salt obtained by the reaction of equivalent amounts of cationic and anionic dyestuffs, the shade of color for example of the cationic dyestuff is more pronounced than is desired in the final dyeing by reason of preponderant color strength (column 2, lines 50-56). Mueller et al. further teaches that dyestuffs such as anthraquinone and azo dyestuffs may be employed (column 3, lines 1-10). Mueller et al. further teaches a plurality of anionic or cationic dyes may be used (column 3, lines 15-20). Mueller et al. further teaches that the dyestuffs produced are dispersion dyestuffs (columns 3-7, examples). Muller further teach that the dyestuff are dispersed in water to dye mixtures of fibers (column 4, lines 70-75). Muller et al. further teach crystal gum, which meets the limitation of binder, can be added to the dyestuff and water to make a paste (column 9, lines 5-20).

Regarding the claimed limitations of a color difference between the anionic and cationic dyes of at least about 10  $\Delta E^*$  units and a water solubility of less than 100 parts per million, Mueller is silent towards these properties and does not explicitly teach these limitations. However, it is reasonable to presume that the said properties are encompassed by the teachings of Hall because the presumption is supported by the use of similar dyes and similar colorless counterions in similar percentages to produce similar dyestuffs to those instantly claimed. The burden is on the applicant to prove otherwise. In re Fitzgerald, 205 USPQ 594.

In the alternative, the claimed limitations of a color difference between the anionic and cationic dyes of at least about 10  $\Delta E^*$  units and a water solubility of less than 100 parts per million would obviously have been provided by the process as disclosed by Mueller et al., because achieving the properties would have been a matter of optimizing a result effective variable. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Mueller clearly teaches a broad range of anionic and cationic dyes and producing dispersion dyestuffs which are conventionally defined as substantially insoluble in water.

18. Claims 24-37 and 42 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Coughlin et al. (WO 03/093373).

Coughlin et al. teach pigment compositions comprising two normally water soluble colored dyes of opposing charge, i.e. of at least one anionic and one cationic

dye are provided (abstract). Coughlin et al. further teach that partial replacement of the anionic/cationic colored compounds with an anionic/cationic surfactant which are colorless (page 6 and 7). Coughlin et al. further teach that the dye complex may be dispersed in water (page 8, paragraph 4) and contain binders (page 10, paragraph 3). Coughlin et al. teach pigments comprising 0.1-49.8% of anionic dye and 0.1-49.8% of at least one cationic dye (page 8, paragraph 1) wherein 0-75 mol% of the anionic/cationic dye can be replaced with anionic/cationic surfactant (page 6 and 7). Coughlin et al. further teach one or more anionic (page 4, paragraph 8) or cationic dyes (page 6, paragraph 1) may be used in the pigment compositions. The dyes taught by Coughlin et al. comprise a plurality of ionic functionalities (page 3 to page 5, see examples).

Regarding the claimed limitations of a color difference between the anionic and cationic dyes of at least about  $10 \Delta E^*$  units and a water solubility of less than 100 parts per million, Coughlin is silent towards these properties and does not explicitly teach these limitations. However, it is reasonable to presume that the said properties are encompassed by the teachings of Coughlin because the presumption is supported by the use of similar dyes and similar colorless counterions in similar percentages to produce similar dyestuffs to those instantly claimed. The burden is on the applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594.

In the alternative, the claimed limitations of a color difference between the anionic and cationic dyes of at least about  $10 \Delta E^*$  units and a water solubility of less than 100 parts per million would obviously have been provided by the process as disclosed by Coughlin et al., because achieving the properties would have been a

Art Unit: 1751

matter of optimizing a result effective variable. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Hall clearly teaches a broad range of anionic and cationic dyes and producing dispersion dyestuffs which are conventionally defined as substantially insoluble in water.

### ***Conclusion***

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.

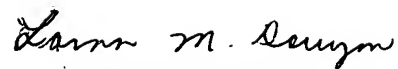
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 1751



Amina Khan, PhD  
February 28, 2007.



LORNA M. DOUYON  
PRIMARY EXAMINER